

**Subpart T—Safety Standards for Methane in Metal and Nonmetal Mines**

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GENERAL

**§ 57.22001 Scope.**

This subpart T sets forth procedures and safety standards for each metal and nonmetal underground mine subject to the Federal Mine Safety and Health Act of 1977. All metal and nonmetal mines will be placed into one of the categories or subcategories defined in this subpart. Mines shall operate in accordance with the applicable standards in this subpart to protect persons against the hazards of methane gas and dust containing volatile matter. The standards in this subpart apply to underground mines as well as surface mills at Subcategory I-C mines. These mines are also required to be operated in accordance with the other applicable health and safety standards published in 30 CFR part 57.

**§ 57.22002 Definitions.**

The following definitions apply in this subpart:

*Abandoned areas.* Areas in which work has been completed, no further work is planned, and travel is not permitted.

*Auxiliary fan.* A fan used to deliver air to a working place off the main airstream; generally used with ventilation tubing.

*Blowout.* A sudden, violent, release of gas or liquid due to reservoir pressure in a petroleum mine.

*Booster fan.* A fan installed in the main airstream or a split of the main airstream to increase airflow through a section of a mine.

*Combustible material.* A material that, in the form in which it is used and under the conditions anticipated, will ignite, burn, support combustion or release flammable vapors when subjected to fire or heat. Wood, paper, rubber, and plastics are examples of combustibles.

*Competent person.* A person designated by the mine operator who has sufficient experience and training to perform the assigned task.

*Explosive material.* Explosives, blasting agents, and detonators. Explosives are substances classified as explosives by the Department of Transportation in §§ 173.53, 173.88, and 173.100 of Title 49 of the Code of Federal Regulations (1986 Edition). Blasting agents are substances classified as blasting agents by the Department of Transportation in § 173.114(a) of Title 49 of the Code of Federal Regulations (1986 Edition). Detonators are devices containing a detonating charge used to initiate explosives. Examples of detonators are blasting caps, electric or non-electric instantaneous or delay blasting caps and delay connectors. [A copy of Title 49 is available at any Metal and Nonmetal Mine Safety and Health District Office of the Mine Safety and Health Administration].

*Geological area.* An area characterized by the presence of the same ore bodies, the same stratigraphic sequence of beds, or the same ore-bearing geological formation.

*Mine atmosphere.* Any point at least 12 inches away from the back, face, rib, and floor in any mine; and additionally, in a Category IV mine, at least 3 feet laterally away from the collar of a borehole which releases gas into the mine.

*Noncombustible material.* A material that, in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors when subjected to fire or heat. Concrete, masonry block, brick, and steel are examples of noncombustible materials.

*Outburst.* The sudden, violent release of solids and high-pressure occluded gases, including methane, in a domal salt mine.

*Substantial construction.* Construction of such strength, material, and workmanship that the object will withstand air blasts, blasting shock, ground movement, pressure differentials, wear, and usage which may be expected to occur in the mining environment.

MINE CATEGORIZATION

**§ 57.22003 Mine category or subcategory.**

(a) All underground mines, and the surface mills of Subcategory I-C mines (gilsonite), shall be placed into one of the following categories or subcategories to protect persons against the hazards of methane and dusts containing volatile matter. Categories and subcategories are defined as follows:

(1) *Category I* applies to mines that operate within a combustible ore body and either liberate methane or have the potential to liberate methane based on the history of the mine or the geological area in which the mine is located. Category I is divided into Subcategories I-A, I-B, and I-C as follows:

(i) *Subcategory I-A* applies to mines that operate within a combustible ore body and liberate methane and in which—

(A) A concentration of 0.25 percent or more methane has been detected in the mine atmosphere and confirmed by laboratory analysis; or

(B) An ignition of methane has occurred.

(ii) *Subcategory I-B* applies to mines that operate within a combustible ore body and have the potential to liberate methane based on the history of the mine or geological area in which the mine is located and in which—

(A) A concentration of 0.25 percent or more methane has not been detected in the mine atmosphere; and

(B) An ignition of methane has not occurred.

(iii) *Subcategory I-C* applies to mines in which the product extracted is com-

bustible and the dust has a volatile matter content of 60 percent or more measured on a moisture free basis<sup>1</sup>.

(2) *Category II* applies to domal salt mines where the history of the mine or geological area indicates the occurrence of or the potential for an outburst. Category II is divided into Subcategories II-A and II-B as follows:

(i) *Subcategory II-A* applies to domal salt mines where an outburst reportable under § 57.22004(c)(1) has occurred.

(ii) *Subcategory II-B* applies to domal salt mines where an outburst reportable under § 57.22004(c)(1) has not occurred, but which have the potential for an outburst based on the history of the mine or geological area in which the mine is located.

(3) *Category III* applies to mines in which noncombustible ore is extracted and which liberate a concentration of methane that is explosive, or is capable of forming explosive mixtures with air, or have the potential to do so based on the history of the mine or the geological area in which the mine is located. The concentration of methane in such mines is explosive or is capable of forming explosive mixtures if mixed with air as illustrated by Table 1 below, entitled "Relation Between Quantitative Composition and Explosibility of Mixtures of Methane and Air".

<sup>1</sup>Measured by the American Society for Testing and Materials, ASTM D 3175-82, Standard Test Method for Volatile Matter in the Analysis Sample of Coal and Coke. (This document is available at any Metal and Nonmetal Mine Safety and Health District Office of the Mine Safety and Health Administration).